

ABSTRACT

Methods and apparatus, including computer program products, for classifying elements of a digital image. An element of the digital image and a prototype representing a class of elements are received and a difference image is generated. The difference image represents differences between the received element and the prototype and includes ON pixels that represent local differences between the received element and the prototype. The difference image includes one or more clusters of neighboring ON pixels. Relative arrangements of ON pixels are determined in the difference image. One or more scores are assigned to the difference image using the relative arrangements of ON pixels in the difference image. Based on the assigned scores, it is determined whether the received element belongs to the class represented by the prototype.

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